


# CONDUCTIVE-CARBON NANOTUBE(CNT)-BIOSENSOR USING CONDUCTIVE CNT DOTTED WITH METALS OR CONDUCTIVE CNT DOTTED WITH METALS WHERE BIORECEPTOR IS COMBINED AND PREPARATION METHOD THEREOF


**Publication number:** KR20040107225 (A)

**Also published as:**

**Publication date:** 2004-12-20

 DE102004027865 (A1)

**Inventor(s):** JUNG DAE HWAN; JUNG HUI TAE; KIM BYEONG HUN;  
KIM DO HYEON; KO YEONG GWAN; LEE JAE SIN; LEE  
SANG YEOP; LEE SEOK JAE

 DE102004027865 (B4)

**Applicant(s):** KOREA INST SCIENCE TECHNOLOGY

**Classification:**

- international: **C12Q1/00; C01B31/02; G01N33/551; C12Q1/00;  
C01B31/00; G01N33/551;** (IPC1-7): C12Q1/00

- European: C01B31/02B; G01N33/551; Y01N6/00

**Application number:** KR20030038232 20030613

**Priority number(s):** KR20030038232 20030613

## Abstract of **KR 20040107225 (A)**

**PURPOSE:** A conductive carbon nanotube(CNT)-biosensor by using a conductive CNT dotted with metals or a conductive CNT dotted with metals where bioreceptor is combined and a preparation method thereof are provided. The biosensor has large surface area, improved conductivity to increase the amount of immobilized biological molecules, and improved accuracy with a small amount of a sample.; **CONSTITUTION:** The conductive-carbon nanotube(CNT) biosensor has a bioreceptor which binds to or reacts with a target bio-material in metals scattering on the conductive CNT or a pattern of the conductive CNT, wherein the bioreceptor is enzyme substrate, ligand, amino acid, peptide, protein, nucleic acid, lipid, cofactor or carbohydrate; and the conductive CNT dotted with metals has a form of CNT-(CONH-R1-S-M)<sub>r</sub> in which M is metal, r is an integer of 1 or over, and R1 is C1-20 carbohydrate, unsaturated carbohydrate or aromatic organic group. The method for preparing the conductive CNT-biosensor comprises binding a conductive CNT-M-nucleic acid complex to a substrate with amine/lysine group on its surface through UV radiation.

Data supplied from the **esp@cenet** database — Worldwide